FIG.1

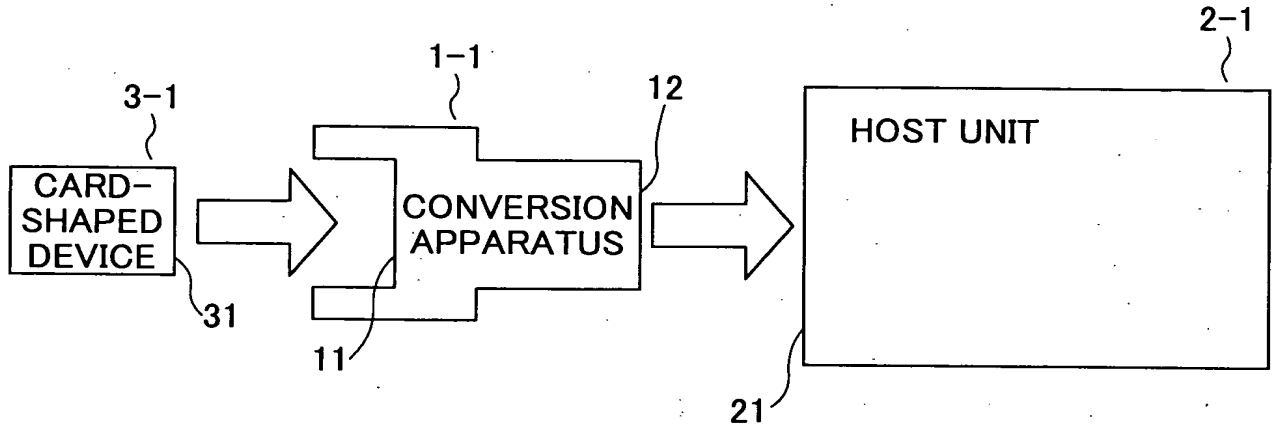

2-1
1-1
3-1
12
HOST UNIT
CARD-SHAPED DEVICE
CONVERSION APPARATUS
31
11
21

FIG.2

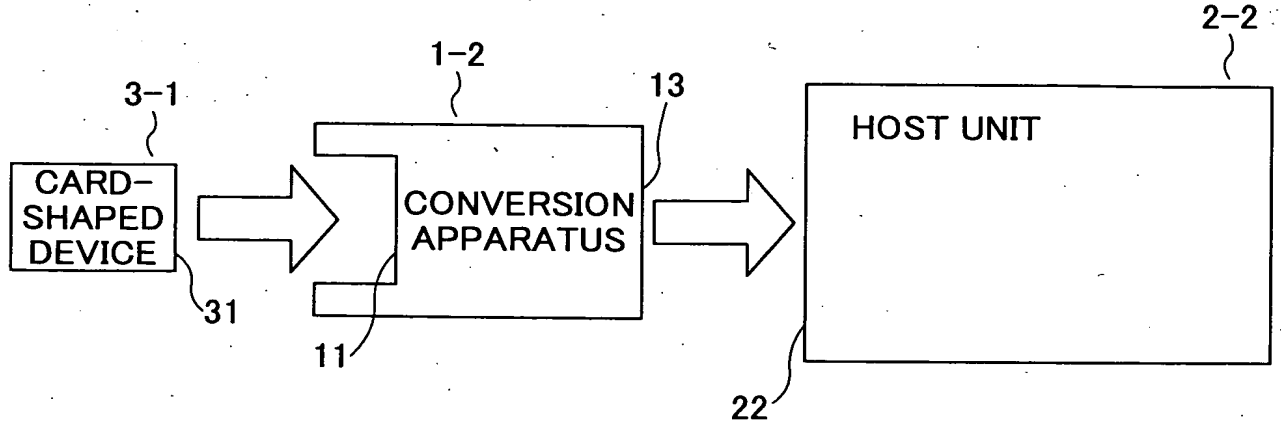

2-2
1-2
3-1
13
HOST UNIT
CARD-SHAPED DEVICE
CONVERSION APPARATUS
31
11
22

FIG.3

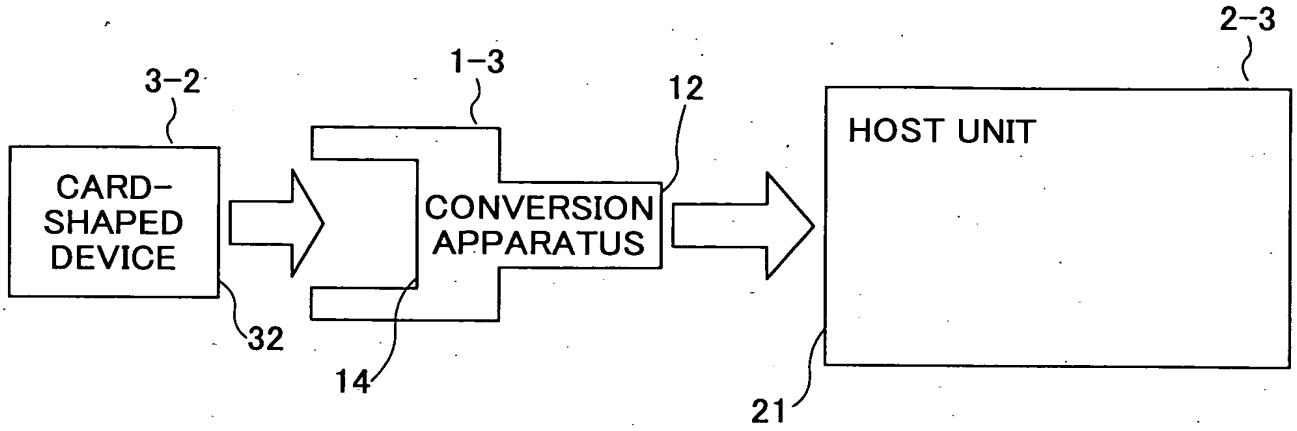

2-3
3-2
1-3
12
HOST UNIT
CARD-SHAPED DEVICE
CONVERSION APPARATUS
32
14
21

FIG.4

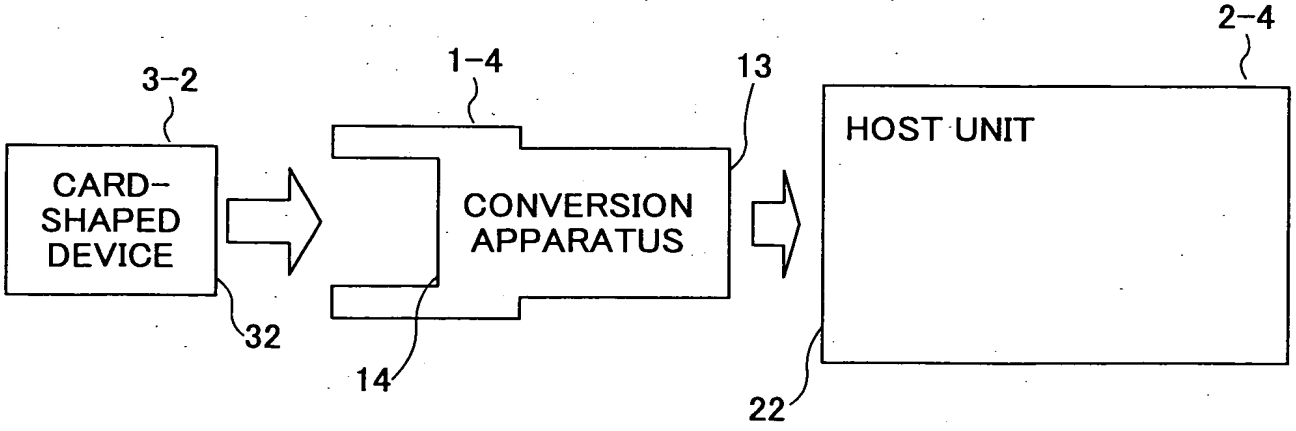

2-4
3-2
1-4
13
HOST UNIT
CARD-SHAPED DEVICE
CONVERSION APPARATUS
32
14
22

FIG.5

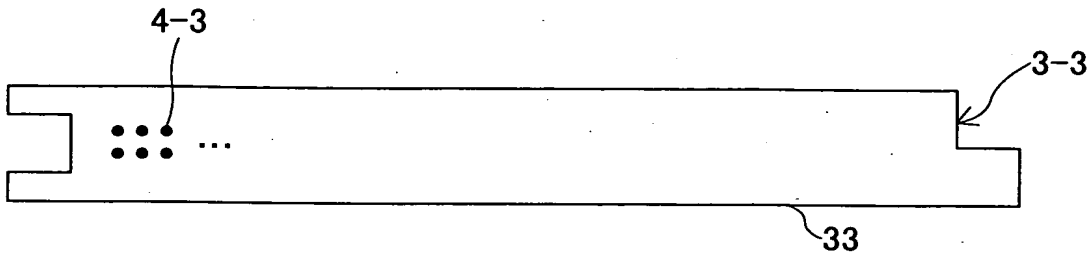


FIG.6

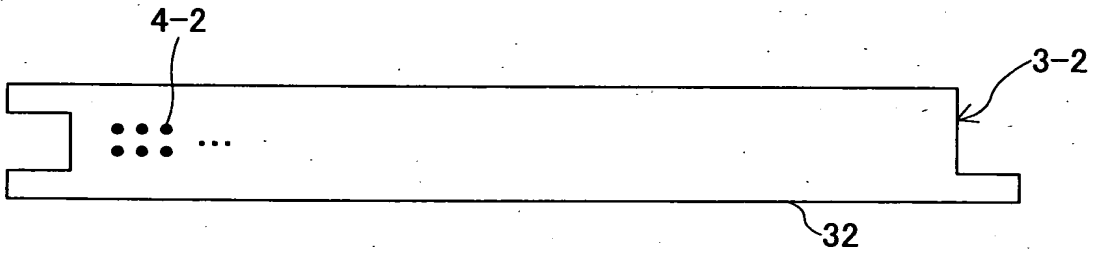


FIG.7

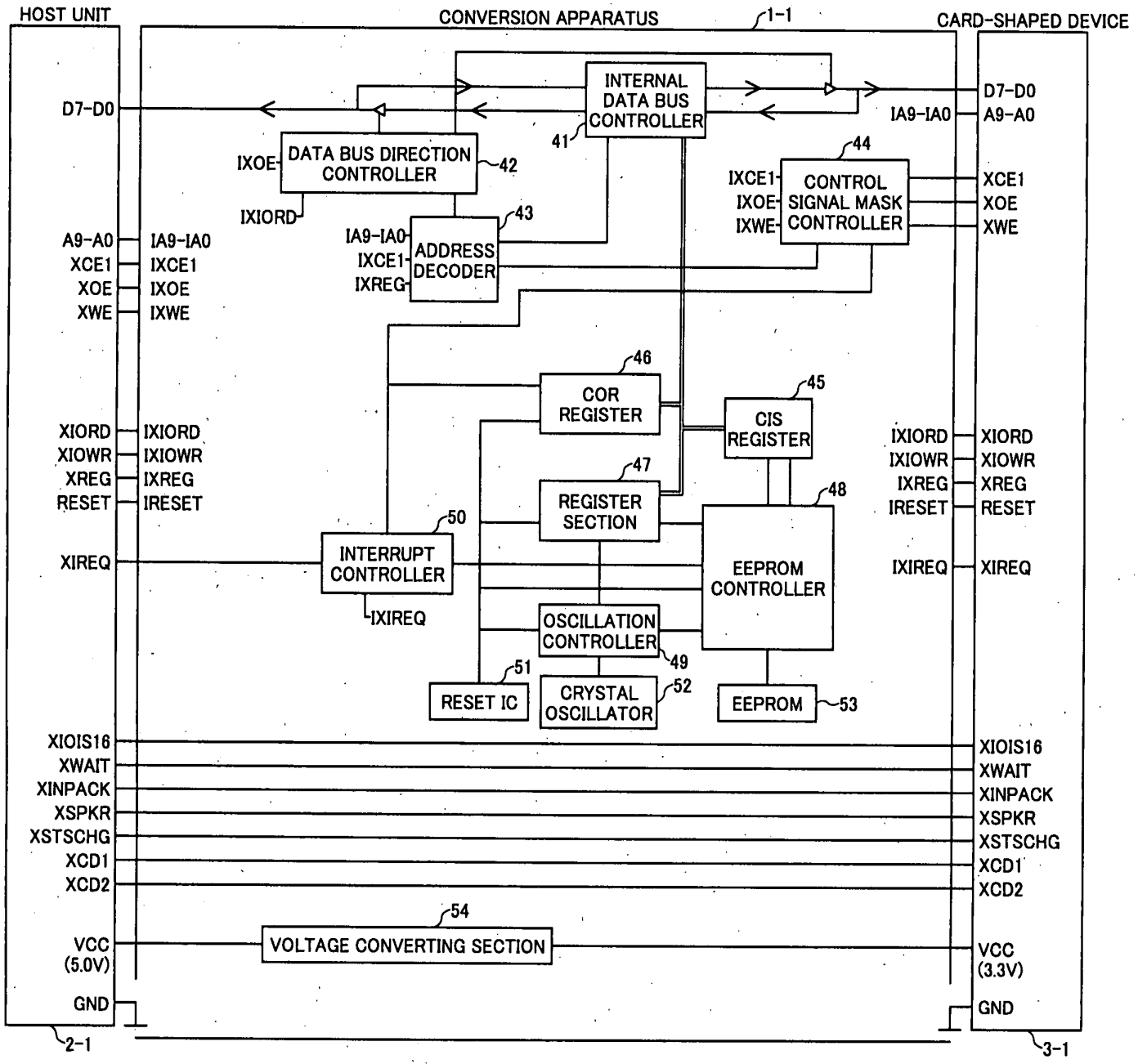

HOST UNIT
CONVERSION APPARATUS
1-1
CARD-SHAPED DEVICE
INTERNAL DATA BUS CONTROLLER
41
D7-D0
IA9-IA0
A9-A0
DATA BUS DIRECTION CONTROLLER
42
IXOE
IXIORD
44
CONTROL SIGNAL MASK CONTROLLER
IXCE1
IXOE
IXWE
XCE1
XOE
XWE
43
ADDRESS DECODER
IA9-IA0
IXCE1
IXREG
A9-A0
XCE1
XOE
XWE
IA9-IA0
IXCE1
IXOE
IXWE
46
COR REGISTER
45
CIS REGISTER
47
REGISTER SECTION
48
EEPROM CONTROLLER
50
INTERRUPT CONTROLLER
IXIREQ
XIORD
XIOWR
XREG
RESET
XIREQ
IXIORD
IXIOWR
IXREG
IRESET
IXIREQ
OSCILLATION CONTROLLER
49
51
RESET IC
CRYSTAL OSCILLATOR
52
EEPROM
53
XIOIS16
XWAIT
XINPACK
XSPKR
XSTSCHG
XCD1
XCD2
54
VOLTAGE CONVERTING SECTION
VCC (5.0V)
VCC (3.3V)
GND
2-1
3-1

FIG.8

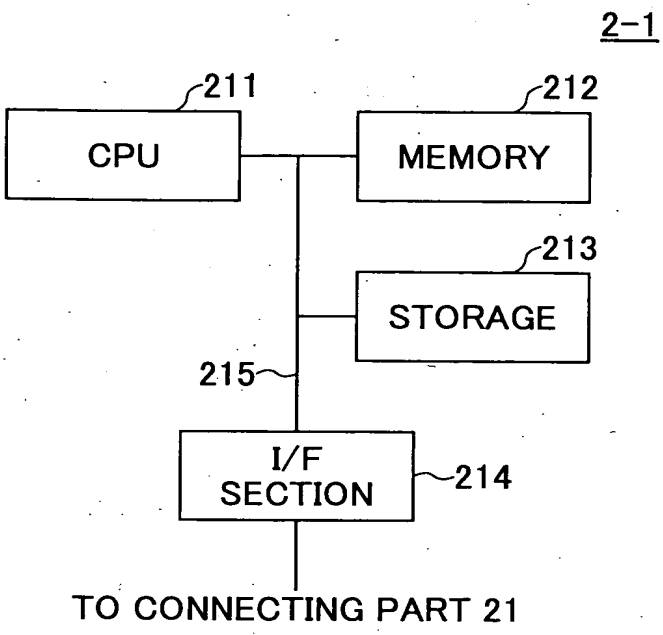

2-1
211
CPU
212
MEMORY
213
STORAGE
215
I/F
SECTION
214
TO CONNECTING PART 21

FIG.9

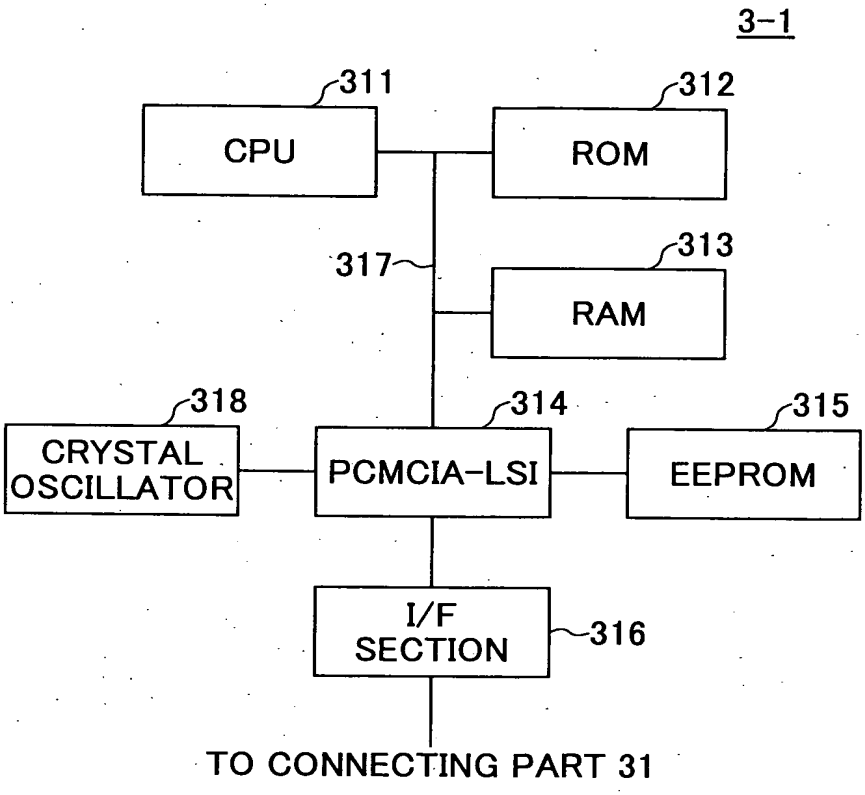

3-1
311
CPU
312
ROM
317
313
RAM
318
CRYSTAL OSCILLATOR
314
PCMCIA-LSI
315
EEPROM
I/F SECTION
316
TO CONNECTING PART 31

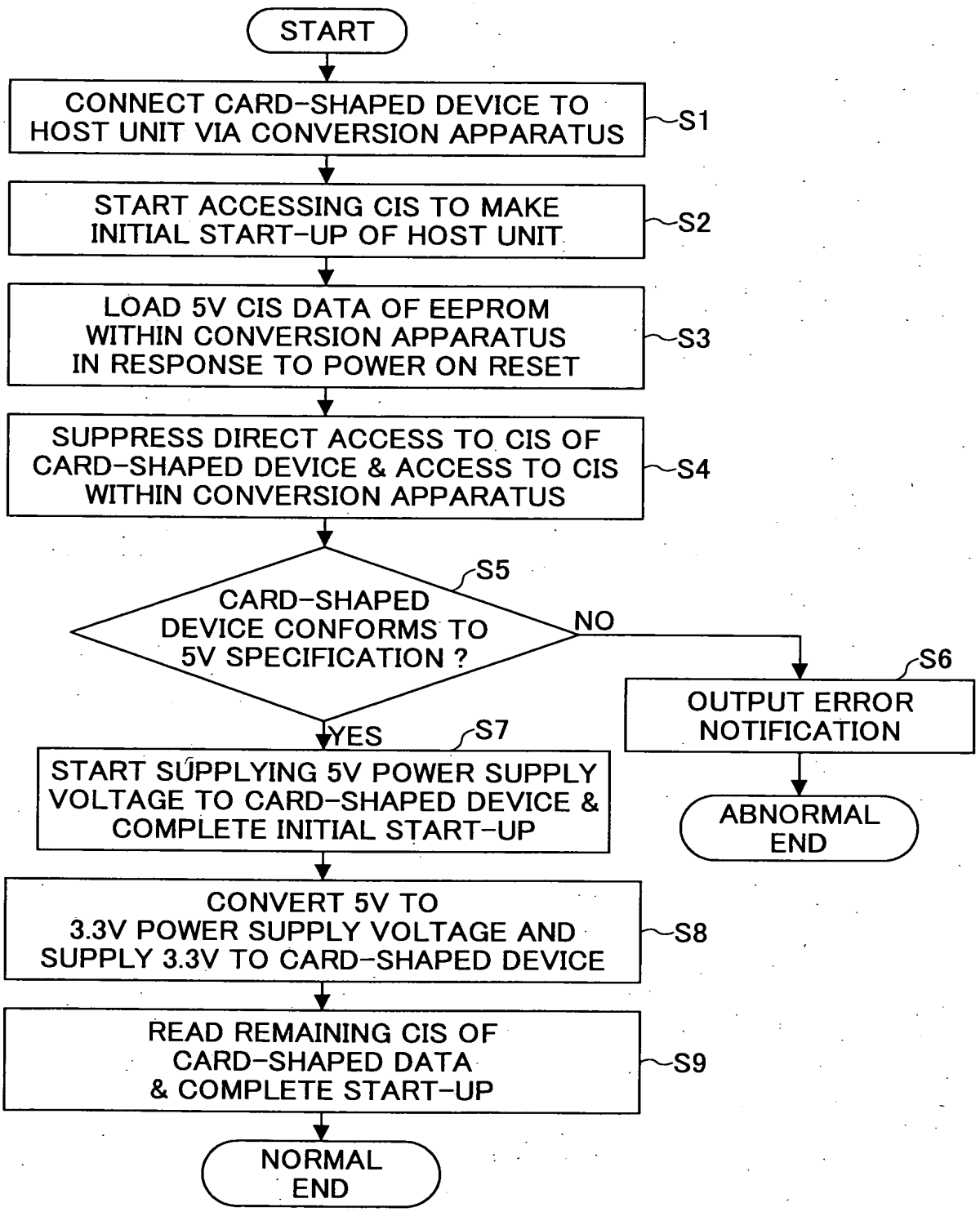
FIG.10

TERMINAL NO. OF PC CARD	TERMINAL NO. OF CF CARD	TERMINAL NAME	DESCRIPTION OF FUNCTION
17,51	13,38	Vcc	POWER SUPPLY INPUT
01,34,35,68	01,50	GND	GROUND TERMINAL
29	20	A0	ADDRESS 0
28	19	A1	ADDRESS 1
27	18	A2	ADDRESS 2
26	17	A3	ADDRESS 3
25	16	A4	ADDRESS 4
24	15	A5	ADDRESS 5
23	14	A6	ADDRESS 6
22	12	A7	ADDRESS 7
12	11	A8	ADDRESS 8
11	10	A9	ADDRESS 9
08	08	A10	ADDRESS 10
10	—	A11	ADDRESS 11
21	—	A12	ADDRESS 12
13	—	A13	ADDRESS 13
14	—	A14	ADDRESS 14
20	—	A15	ADDRESS 15
19	—	A16	ADDRESS 16
46	—	A17	ADDRESS 17
47	—	A18	ADDRESS 18
48	—	A19	ADDRESS 19
49	—	A20	ADDRESS 20
50	—	A21	ADDRESS 21
53	—	A22	ADDRESS 22
54	—	A23	ADDRESS 23
55	—	A24	ADDRESS 24
56	—	A25	ADDRESS 25
30	21	D0	DATA 0
31	22	D1	DATA 1
32	23	D2	DATA 2
02	02	D3	DATA 3
03	03	D4	DATA 4
04	04	D5	DATA 5
05	05	D6	DATA 6
06	06	D7	DATA 7
64	47	D8	DATA 8

FIG.11

TERMINAL NO. OF PC CARD	TERMINAL NO. OF CF CARD	TERMINAL NAME	DESCRIPTION OF FUNCTION
65	48	D9	DATA 9
66	49	D10	DATA 10
37	27	D11	DATA 11
38	28	D12	DATA 12
39	29	D13	DATA 13
40	30	D14	DATA 14
41	31	D15	DATA 15
36	26	-CD1	CARD DETECTING SIGNAL
67	25	-CD2	CARD DETECTING SIGNAL
07	07	-CE1	CARD ENABLE: CARD SELECTION SIGNAL
42	32	-CE2	CARD ENABLE
09	09	-OE	OUTPUT ENABLE: READ TERMINAL OF ATTRIBUTE MEMORY
15	36	-WE	WRITE ENABLE: DATA WRITE TERMINAL TO ATTRIBUTE MEMORY
16	37	-IREQ	INTERRUPT REQUEST SIGNAL: VALID ONLY DURING I/O INTERFACE MODE
43	33	-VS1	TERMINAL FOR DETECTING OPERATING VOLTAGE WITHIN CARD FROM OUTSIDE
44	34	-IORD	USED TO READ DATA FROM I/O MODE REGISTER OF CARD
45	35	-IOWR	USED TO WRITE DATA TO I/O MODE REGISTER OF CARD
33	24	WP/-IOIS16	16-BIT I/O PORT
18	—	VPP1	POWER SUPPLY FOR PROGRAM AND PERIPHERAL
52	—	VPP2	POWER SUPPLY FOR PROGRAM AND PERIPHERAL
57	40	-VS2	TERMINAL FOR DETECTING OPERATING VOLTAGE WITHIN CARD FROM OUTSIDE
58	41	+RESET	PUTS CARD TO NON-SET STATE BY CLEARING CCR CARD CONFIGURATION REGISTER & STARTS OTHER INITIALIZATIONS WITHIN CARD
59	42	-WAIT	DELAY END OF I/O ACCESS CYCLE IN PROGRESS
60	43	-INPACK	INPUT RESPONSE SIGNAL
61	44	-REG	ATTRIBUTE MEMORY SPACE SELECT
62	45	-SPKR	SPEAKER OUTPUT TERMINAL (DIGITAL OUTPUT)
63	46	-STSCHG	CARD STATE CHANGE DETECTION

FIG.12


START
CONNECT CARD-SHAPED DEVICE TO HOST UNIT VIA CONVERSION APPARATUS
S1
START ACCESSING CIS TO MAKE INITIAL START-UP OF HOST UNIT
S2
LOAD 5V CIS DATA OF EEPROM WITHIN CONVERSION APPARATUS IN RESPONSE TO POWER ON RESET
S3
SUPPRESS DIRECT ACCESS TO CIS OF CARD-SHAPED DEVICE & ACCESS TO CIS WITHIN CONVERSION APPARATUS
S4
S5
CARD-SHAPED DEVICE CONFORMS TO 5V SPECIFICATION ?
NO
YES
S6
OUTPUT ERROR NOTIFICATION
ABNORMAL END
S7
START SUPPLYING 5V POWER SUPPLY VOLTAGE TO CARD-SHAPED DEVICE & COMPLETE INITIAL START-UP
CONVERT 5V TO 3.3V POWER SUPPLY VOLTAGE AND SUPPLY 3.3V TO CARD-SHAPED DEVICE
S8
READ REMAINING CIS OF CARD-SHAPED DATA & COMPLETE START-UP
S9
NORMAL END